



CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

September 14, 2010

S. 2812 **Nuclear Power 2021 Act**

*As ordered reported by the Senate Committee on Energy and Natural Resources
on July 21, 2010*

SUMMARY

S. 2812 would authorize appropriations for the Department of Energy (DOE) to enter into cooperative agreements with private-sector entities to develop and license standard designs for small modular nuclear reactors with capacities of up to 50 megawatts. CBO estimates that implementing S. 2812 would cost \$407 million over the 2011-2015 period, assuming appropriation of the necessary funds. Enacting S. 2812 would not affect direct spending or revenues; therefore, pay-as-you-go procedures do not apply.

S. 2812 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments.

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of S. 2812 is shown in the following table. The costs of this legislation fall within budget function 270 (energy).

	By Fiscal Year, in Millions of Dollars					2011- 2015
	2011	2012	2013	2014	2015	
CHANGES IN SPENDING SUBJECT TO APPROPRIATION						
Estimated Authorization Level	35	125	100	100	100	460
Estimated Outlays	21	85	99	102	100	407

BASIS OF ESTIMATE

S. 2812 would direct the Secretary of Energy to enter into cooperative agreements with private-sector entities to develop standard designs for small modular nuclear reactors as well as processes for licensing such reactors with the Nuclear Regulatory Commission (NRC). The bill would authorize appropriation of the necessary sums for DOE to cover up to 50 percent of the cost of developing designs for such reactors and up to 25 percent of the cost to demonstrate licensing processes and would specify a final deadline for all work to be completed by January 1, 2021.

CBO estimates that fully funding S. 2812 would require appropriations totalling \$460 million over the 2011-2015 period and an additional \$100 million in 2016. That estimate is based on information from DOE about the agency's costs to develop facilities and demonstrate licensing processes for new, large-scale nuclear reactors and takes into account the cost-share requirements specified in the bill. Assuming appropriation of those amounts, CBO estimates that resulting outlays would total \$407 million over the 2011-2015 period.

The NRC also would incur costs to certify designs and develop licensing procedures for small reactors under S. 2812. However, according to the NRC, the agency already plans to develop its capacity to support regulatory processes for small modular nuclear reactors. As a result, CBO estimates that implementing S. 2812 would not significantly affect net spending by that agency; any such spending would be subject to appropriation and would be largely offset by fees that the NRC is authorized to collect from regulated entities.

PAY-AS-YOU-GO CONSIDERATIONS: None.

INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT

S. 2812 contains no intergovernmental or private-sector mandates as defined in UMRA and would impose no costs on state, local, or tribal governments.

ESTIMATE PREPARED BY:

Federal Costs: Megan Carroll

Impact on State, Local, and Tribal Governments: Ryan Miller

Impact on the Private Sector: Amy Petz

ESTIMATE APPROVED BY:

Theresa A. Gullo

Deputy Assistant Director for Budget Analysis